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SANITARY LEGISLATION,
PAST AND FUTURE:

THE

Value of Sanitary Reform,

AND

THE TRUE PRINCIPLES FOR ITS ATTAINMENT.

PARTS OF TWO ESSAYS READ BEFORE THE NEW YORK
SANITARY ASSOCIATION, OCTOBER 3D AND
NOVEMBER 14TH, 1861,

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SANITARY LEGISLATION—PAST AND FUTURE.

Mr. President, and Members of the New York Sanitary Association:

THE period is again approaching when it behoves the friends of Sanitary Reform—a phrase synonymous with saving the lives of the people—to be about the noble work which they have set out to accomplish. Though seven times defeated in their efforts to stay the progress of disease and death, their hearts fail not, nor is their determination abated. Nor though seventy times seven should the enemies of this holy cause succeed, by bribery and corruption, in postponing the day for the inauguration of the most valuable of all the reforms known amongst men, will its votaries lay aside their armor, or cease to contend for the faith which animates them with the assurance of final success.

Though, like the disciples of Him who went about healing all manner of disease, and unlike them who have thus far betrayed the people to their destruction, they carry neither purse nor scrip, the friends of Sanitary Reform in this city will never cease to show the public their true interests in this matter, and demand of their legislators the abolition of the official nuisances which are the only obstacles to the removal of those physical nuisances, under whose foul influences so many thousands find untimely graves.

One of the most surprising phenomena in the political economy of this state and city, is the indifference of the

people to their own death records. They either refuse to listen to, or, if they hear, they heed not, the facts concerning the dealings of death among themselves. There is no denial that the mortality of this city is much greater than that of many others of far inferior advantages for salubrity and longevity, and yet the trump of the archangel sounds in their ears in vain. Their well-cushioned officials drain them of their fat salaries, but do literally nothing in return to raise the standard of health, or check the march of pestilence. Their legislators listen year after year to the appeals in behalf of the thousands of dying infants, and when apparently moved to comply with the urgent cry for relief from the threatenings of disease and death, the demon of bribery drops a golden curtain between them and the pictures of desolate misery which have so moved them, and suddenly all assumes a rose color, and thenceforth, while their pockets are filled with sinful wealth, the cemeteries of the metropolis become populated in an increased ratio.

RECENT FAILURES OF LEGISLATION.

Lest any one should regard this as too strong language, let me present the facts upon which it is based:

In 1859, a Health Bill, which would have been the means of saving thousands of lives in this city, passed the State Senate, almost unanimously, and went down to the Assembly, where there was every indication that it would soon become a law. It passed readily through all the preliminary stages of legislation, until it reached its third reading, when, on his name being called, a member from this city, who had been its avowed friend, and its acknowl-

edged and accredited advocate before the House, and who had pledged himself, in the face of the Assembly, to the honorable fulfillment of the trust which the friends of the bill had reposed in him—that member rose in his place, and *declined to vote*, but said if his vote became *necessary to carry the bill*, he would, in that case, vote in the affirmative—an alternative which he himself could have rendered unnecessary. The withdrawal of his vote and influence, at this juncture, *killed the bill*, and as a consequence, destroyed the lives of we know not how many of his constituents, and all, as he himself afterward declared, because by the success of the very measure of which he himself was the putative father, three of his friends would be legislated out of office—offices which, of course, they were incompetent to fill.

Dismayed, but not disheartened, by this treachery, justice to the betrayed and down-trodden poor, and the claims of Sanitary Science, demanded a renewal of the efforts the next year. Accordingly the Legislature was approached with a bill, with details improved by experience and a better knowledge of the health laws of other cities, both foreign and domestic. It was presented favorably to the Assembly by the appropriate Standing Committee, with an elaborate report,* fully setting forth its merits, and the urgent necessity of the measure. It was, in fact, a measure of life or death to thousands of both city and State.

But, alas ! its friends reckoned again without a sufficient knowledge of the character of many of our law-makers. It was the year of gridiron railroad scheming, and Sus-

* Report of the Committee on "Incorporation of Cities and Villages."—Assembly Document 129, March 9, 1860.

quehanna bonuses; and again the office-holders of this city, one of whom, from the City Inspector's Department itself, was a member of Assembly, so wrought upon the fears and pockets of the friends of those measures, that the Health Bill was again defeated, even two of the signers of the report voting against it.

The crying of the helpless, nevertheless, ceased not to fill our ears, and the demands of Science, so far from yielding to these base betrayals of her rights, grew louder and stronger. The subject was again presented to the Legislature of the present year, and from the character of many members of the Assembly, there was every prospect that in that branch it would meet with success, with a reasonable hope in the upper house. The vast importance of the measure was appreciated by a majority of the assemblymen, in all its fullness, and though opposed, both covertly with money, and openly by speeches, it passed that body by a vote of exactly two to one. But the seats of the senate chamber were occupied by the same individuals as in the year before, and though there were, among them, many above reproach or suspicion, to a too large number the last chance had come for a pecuniary addition to the unholy gains of legislation.

It is averred that about \$30,000 was raised in this city, among the office-holders, and expended to defeat the Health Bill of last winter. To the exactness of this statement, we cannot, of course, affirm; but this we do know: that on the Saturday previous to the Wednesday of adjournment, the vote for a third reading stood 19 to 12, while just on the eve of adjournment, when the bill was put upon its passage, the hopes of a suffering community were dashed to

the ground by a reversal of this vote, and some thousands of new-made graves stand as monuments of the wickedness of men whose names are known as partakers of those thirty pieces—the price of innocent blood.* Then it was that the enemies of the people's dearest interests triumphed; thus have their selfishness and wickedness stood against the demands of humanity, and opposed the progress of scientific reform.

The recent revelations of a famous libel suit but dimly shadow forth proceedings similar to those attendant upon the defeat of the Health Bill of last winter, the realities of which are well known.

The dying eagle saw on the arrow whose barb had pierced its vitals, feathers plucked from its own wing; so, through the salaries of its officials, the tax-payers of this city supplied the motive power of the machinery which did this death-dealing work among themselves.

Thus were we furnished with another proof that

“Man's inhumanity to man
Makes countless thousands mourn.”

LOSS OF LIVES.

Let me now attempt, with as much brevity as is compatible with so serious a subject, to show something of what this city has suffered from these corruptions, and

* The *New York Daily Tribune* made the following editorial announcement, on Monday, April 15, 1861 :

“We understand that \$10,000, in cold cash, went up from our city to Albany on Friday night, to defeat the Metropolitan Health Bill. This was an *extra* sum, and is understood to be on account of Street Sweeping. We should hate to have it either passed or killed with money.”

what it might have gained, had our legislators and office-holders all been actuated by honest motives.

There are certain diseases which infest cities, almost exclusively—and to the greatest extent those which are most crowded, and filthy, and the least ventilated. They have impurity for their father and privation for their mother.

There is another class of diseases which, though not peculiar to cities, are vastly more prevalent and destructive in localities where the laws of hygiene are neglected—where the broom, the whitewash brush, and the Health Warden, are equally strangers, but which are shorn of half their influence where cleanliness and pure air are the rule.

There is yet a third class, which are always and absolutely preventable, anywhere and everywhere.

To the first class mentioned belong Cholera, Cholera Infantum, Typhus and Typhoid Fevers, and some others.

In the second class are comprised Scarlatina, Measles, Whooping-cough, Diarrhoea, Dysentery, Croup, Erysipelas, Puerperal and some other forms of fever, Infantile Convulsions, Hydrocephalus, Marasmus, and some others.

In the last, or wholly preventable class, are included Small Pox and Intermittent Fever.

During the last 22 years, there have died in this city, of the first class I have mentioned—

Of Cholera Infantum.....	19,346
Of Typhus and Typhoid Fevers.....	10,108
Total.....	29,454

But see what an astonishing progress the first of these has made. In the three years, 1816, 1817, 1818, there died of Cholera Infantum, 81. In the year 1860, there died of it, 1,664. The ratio of increase of this mortality, compared with the increase of population, was as 20 to 6.

By the second class of diseases, those by which our mortality is greatly increased by vicious city conditions, the losses were as follows :

Scarlatina.....	12,357
Measles.....	4,630
Whooping-cough.....	4,357
Croup.....	8,513
Diarrhœa.....	9,656
Dysentery.....	10,800
Erysipelas	2,770
Puerperal Fever.....	2,523
Convulsions.....	28,251
Hydrocephalus.....	15,739
Marasmus.....	21,880
<hr/>	
Total.....	121,476

Here is an aggregate mortality of over 150,000, of which I believe that, under the best possible hygienic conditions in which this city might have been put, one-half might have been prevented. It is at least safe to say that one-third of this mortality was due to the vicious modes of life of the families among whom it occurred. Here, then, is a population of 40,000 actually lost within the period of one generation, which, under proper management by the public officers of health, might now have swelled the already proud supremacy of this metropolis.

I have omitted from this enumeration the deaths by *con-*

sumption—which disease, though due in a great measure to external circumstances of life, is oftentimes the offspring of hereditary taint. By that disorder there fell, in the 22 years, nearly 50,000 victims, a large number of whom might, doubtless, have been saved by proper sanitary treatment.

These diseases, taken collectively, constitute the sanitary index of their locality. They are the hygienic barometer, whose figures on the scale denote the state of physical health, derived from the modes of life, the character of the dwellings, the condition of the streets, the attention given to the removal of filth, the extent and perfection of the sewerage, and the degree of intelligence and supervision of the health officers. The higher the figures, the more degraded are the people in all those circumstances.

SMALL-POX.

I have said that the mortality from the diseases of these first two classes here enumerated, is the index of the hygienic condition of the people, and of the care extended over them by their sanitary officers. Judged by that standard, we find the metropolis of the western hemisphere at a lower grade than any other known Christian city of equal size.

But what shall we say of it, when our attention is turned to the diseases of the third class, which are derived from causes absolutely, and at all times, preventable, and from which there is no need of a single death in a century, but from one of which alone, and that the most easily prevented of all, we have to enumerate the loss, during

the past half-century, of nearly 11,000 lives—every one of which could, and should, have been preserved?

The average number of deaths by Small-pox for the past ten years, in this city, was 406. The present year has already exceeded that by about half a hundred, and at the rate of the past nine months, the whole mortality at the end of the year, will have been at least 600. When we further consider the facts respecting the control of this disease in some of our sister cities, from which, during the past two or three years, it has been eradicated by the well-directed energy of their Boards of Medical Health Wardens, the contrast of our degraded and depraved condition is shocking indeed; and in view of the other fact already adverted to, of the defeat of the Health Bill in the Legislature, by the wicked machinations of those officials who should have been the first, as they are the only ones whose duty it is, to apply the great preventive, we hold them, and those above them who participated in producing the disastrous result—we hold them individually responsible for the loss of these lives. A fearful retribution awaits them for this mortality by Small-pox at least, to say nothing of that larger number by other causes, which, but for them, would have been prevented.

INSANITARY MEASURES.

In general estimation, probably, there could exist no more inauspicious period for the prosecution of works of benevolence and reform, than during the excitement of a general war. The clang of arms, the hurrying to and fro of armed men, and especially the profound excitement

and apprehension of dire evils which, like a heavy cloud, envelop the minds of men, are apt to blind them to all else than the immediate preservation of their homes and firesides.

Nevertheless, there are considerations independent of the preservation of our families from immediate attacks of sickness; and an examination of this Sanitary question, in connection with its bearings upon the present state of the country, will be found instructive.

It is now nearly twenty years since the practice was instituted in this city, of putting the great interests of the Public Health in charge of party politicians, ignorant of the causes of diseases, or the means of their prevention. Since that period the ratio of mortality to the population has been rapidly on the increase, while the expenses of the departments have even more largely augmented. In this respect the city of New York has pursued a course directly the reverse of that of almost every other large city. Before the light of Sanitary Science had become generally diffused—before it had reached above the masses, and had thrown its illuminating rays upon the government above them—in almost every other city the custom prevailed, which now obtains here, of confiding the Sanitary duties to hands un-educated in the laws and circumstances which govern the production of diseases among masses of people. Formerly *all* diseases were attributed to providential visitations, to meteoric influences, or other occult causes, over which man had no control, and the duties of the physician pertained solely to the curing of distempers which were thus mysteriously produced. Even as far down in the age of the civilized world as the time of Elizabeth, when the jail

fever broke its prison bounds at the assizes, and swept prisoners, spectators, juries, and judges into simultaneous graves, the sources of this and other serious distempers, now so perfectly known, were undreamed of, and physicians had no part or lot in their prevention. Even when, a century later, in 1665, the plague and other diseases swept away in one year nearly 100,000 of the inhabitants of London, the idea of a public Sanitary reform seemed scarcely to have entered into the minds of either people or government; but in the following year, the great conflagration of that city, which laid 436 acres of houses in ashes, burned into them the idea that by wider streets, more spacious tenements, above-ground dwellings, and other means, the reappearance of the terrible epidemic might be avoided. It was then that the science of preventive medicine began to be understood, to which the great SYDENHAM gave a powerful impulse—whereunto the heroic MARY WORTLEY MONTAGUE triumphantly assisted, by the practice of inoculation,—and the immortal JENNER gave the finishing touch, by his grand discovery of vaccination.

From that period, the commencement of the present century, the march of Sanitary Science has been rapidly onward, until into every corner of the civilized globe, with one exception, its benignant healing and preservative rays have been allowed free access.

But one dark spot remains, its gloom enhanced by its contrast with former days—for, as I have already stated, it was the uniform practice prior to the last twenty years, to confide the public health of this city to the care of men more or less educated to the subject, a rule which since

that period, has been completely reversed. These changes, both from wrong to right in other cities, and from right to wrong in New York, have produced their legitimate effects: while in the one case human life has been saved and lengthened, in the other it has been shortened and destroyed.

For examples, I have already quoted from annual reports of the mortality of this city for the last 22 years, and have shown the immense loss of life which it has sustained from causes, some wholly and others partially, within control.

Let me now ask your attention to a passage from a recent paper by Dr. V. MOTT FRANCIS, the worthy son of the worthy sire, so long the pride of this his native city :

“ It will be seen how much the science has done for human life, by a glance at the statistics of mortality of the great cities of Europe, which have been blessed with truly scientific physicians, and have yielded to the mild authority of the Goddess Hygeia. In Paris, in the fourteenth century, the mortality was 1 in 20; in 1830, the number of deaths was 1 in 32. Within a very recent period, the hygienic measures resorted to have reduced the mortality to 1 in 36.71. M. MARC D'ESPINE, in a work on ‘Comparative Mortuary Statistics,’ proves that in the sixteenth century the duration of life in Geneva was less than 5 years; in the seventeenth century, 11 years; in the early part of the eighteenth, 27 years, and at its close, 32 years; at the present time it is 44 years. The population of London in 1665 was no greater than that of New York now, and yet so miserable was the hygienic government, and so horrible the dirt and slime of the city, that in that year, besides 68,000 deaths by the plague, there were 28,000 deaths from all other diseases. We here behold a mortality frightful

to contemplate—1 in 24. What is the case now, since a thorough and proper hygienic supervision has been exercised in that vast metropolis? Longevity has been steadily increasing, and we see, with joy, the fruit of our reward, in the happy result which the statistics of the British capital present. One in 40 is the ratio at this present day. Our own country suffers, not so much from ignorance, as from the indifference of those invested with official authority. Our legislators and city rulers seem only to care about filling their bottomless pockets, and not for the lives of the thousands who perish annually from their avarice and gross neglect of the high duties they pledged themselves to perform when asking the votes of their fellow-citizens. Let us look at the sanitary statistics of the four great cities of the United States for a moment. In 1850, the deaths in New York averaged 1 in 33.52 ; in Philadelphia, 1 in 37.84 ; in Boston, the same ; in Baltimore, 1 in 36.19. In 1857, the mortality in New York increased to 1 in 27.15 ; in Philadelphia, it diminished to 1 in 44.5 ; in Boston, to 1 in 39.88 ; in Baltimore, 1 in 36.19. These figures prove that Baltimore remained stationary (yet comparatively good) ; that Boston improved ; that Philadelphia improved when compared to 1850, but lost when compared to 1855, when only 1 in 47.81 died ; but that New York has reached almost the same ratio that London exhibited nearly two hundred years ago. The rulers of New York," continues the author, "must feel happy, when they retire at night to their couches of down, with the sweet reflection that 1 in 27.15 die annually in the city which they rule. It must gratify their patriotic aspirations when they see plainly that, in a few years, New York will be first in everything, *even in the number of her deaths*. What glory ! the greatest city for human mortality in the world !"

But it is in view of the question which now so fearfully agitates the country, that this matter of Sanitary reform possesses a direct and overpowering interest. If the

strength of a State consists in the stalwart arms of its yeomanry, then, if ever, we can appreciate the value of a single life, and we can count at the present hour, the loss we have sustained by the premature burial, during the last twenty or twenty-five years, of 50,000 individuals, who should now be here to aid us in the preservation of our country and Constitution.

It is told of an elderly mother in Rhode Island, when congratulated on her patriotism as she cheerfully gave her three sons to go forth in defense of her home and her country, that she replied, "if she could but have anticipated all this in time, she would have doubled the number."

Oh! if the short-sighted rulers of this city, who, twenty years ago, subverted the then order of arrangements which had prevailed for forty years, if they had but let things alone, comparatively inert as they were, in all probability the present race of inefficient pretenders to Sanitary government would have been unknown, and like the Rhode Island matron, we might now have had double the number of our country's defenders in the ranks from this city, when every man and woman counts at their true worth.

We know not what the future has in store for us—but it is not impossible that another quarter of a century may find us in even a worse predicament than the present. Would it not be an act of mere worldly wisdom, to begin now to save the lives of the children and youth, who then may be needed for the protection of the laws?

This, we must all admit, is, in comparison with the

higher view of the duties of man on earth, a consideration which dwindleth to insignificance by the side of the glorious duty which belongs to all who live—to serve their God with a zeal equal to that with which their country is now served; but I use it merely to illustrate the mundane value of every life, and how much they serve their country who seek to save and increase its population, and how worse than rebels are they who, having the power, are, to say the least, indifferent to its exercise.

PRACTICAL BEARINGS—PECUNIARY LOSSES.

The subject of Sanitary reform presents itself to us in a number of important practical aspects. In order to realize these in their true force, we must first ascertain what is the actual loss of life, over what is unavoidable. For this city, let us take last year's mortality as the basis of calculation.

One and a half per cent. per annum of the population is the standard rate of mortality in the most salubrious districts. Calculating from this datum, we have the following results for this city in 1860 :

Population.	Deaths.	One in	Percentage.	Excess over $1\frac{1}{2}$ per cent.
814,277	22,710	35.85	2.78	10,496

If, therefore, the city of New York could last year, by any possibility have been brought to a natural state of salubrity, its population this day, would have been greater than it is by 10,496. That number of human beings would be living and animating the households, instead of mouldering into dust.

But that extreme result could have been effected, under the present maladministration of imperfect laws, only by something akin to a miracle ; and we will, for the present purpose, in our estimates of what might be done by a thorough application of Sanitary law, content ourselves with a deduction of 50 per cent. from that number, and suppose we had sacrificed, by the neglect of Sanitary precautions, only 5,248 of our fellow-creatures, and this in a year of more than usual salubrity.

There is not a reasonable doubt that these 5,248 lives might have been saved. The history of Sanitary science, the practical results of the application of Sanitary measures in numerous places, and under every variety of circumstance, and the opinions of many of the soundest and most experienced practitioners of medicine and hygiene, the world over, all concur in proving that governments, in this particular, hold the lives of their subjects in their hands. It were easy to fatigue you with the recital of facts and authoritative opinions to this effect. The vast progress made in the cultivation of a knowledge of Sanitary law and its applications, during the last two centuries, forms one of the most pleasing, as it is a most striking, proof of the advance of Christian civilization in modern times.

We believe in the sacredness of human life, and that its unnecessary waste by neglect is but one degree lower in criminality than its willful destruction. Every impulse of honor, of self-respect, and religious duty, should impel to the industrious use of the most enlightened public means for its preservation. But, sorry we are to say it, these higher considerations are too apt to be overlooked by those

who have the care of the public health, either from ignorance of the proper means, or worse still, from self-enduring blindness from the interposition of their personal and political interests.

While as yet the public mind is too uneducated, on this great question, to expect a *popular* demand of our rulers, of a reform in the existing abuses of power, we may address ourselves to an inferior, yet to many a more potent stimulus, i. e., *self-interest*. To say nothing of the expenses attendant upon the sickness of those who die—of the cost of their funerals, the loss of their services, the loss of time by the surviving relatives, and the derangement of their private affairs—let us glance at another direct product of the same insalubrious circumstances which produced these 3,974 premature deaths.

It is estimated by Prof. PLAYFAIR that for every death in a community there are 28 cases of sickness, an estimate which, as far as I am aware, has borne the test of examination, and stands undisputed. At this rate there were in this city, in 1860, 146,944 unnecessary cases of sickness. Each case consumed, at a moderate estimate, an average of not less than ten days of the patient's time, making an aggregate loss of 4,025 years.

It is a good principle of law, that whoever receives a bodily injury on account of the neglect or carelessness of another, is entitled to recompense therefor. Thus governments are obliged to keep the roads, bridges, wharves, &c., in good order, or to compensate for any injury to body, of man or beast, arising from their neglect.

Our law libraries abound in statutes and decisions on

this subject. Well, government also assumes the care of the public health—it guarantees protection to its dependent people, against disease-producing nuisances.

This city, presenting to every man, woman, and child, on their arrival within the bounds of its authority, its code of Sanitary laws, virtually says to each, “Here you may dwell in immunity from danger from all causes of sickness or injury, except such as you may bring upon yourself, or that may be produced by the uncontrollable elements. If your limb is broken by falling into an unguarded hole in the public highway, we are responsible therefor, and will pay the damages.” This is settled law. But does not government also virtually say the same of typhus fever, or dysentery, or erysipelas, produced by inhaling the foul gases from an untrapped sewer, or from the reeking masses of garbage which fill the gutters, or line the sidewalks in huge open boxes, or the six months’ accumulation of street filth—does it not say the same of small-pox, from whose pitiful ravages it might, with a little energy, protect every one; and in such cases also, as in the other, should it not remunerate the sufferer for all the loss of time, and other expenses incurred?

I state the case simply, for it seems a self-evident proposition, needing no argument.

On this principle, then, the account for damages against the government of this city, for the year 1860, would stand thus:

The Mayor, Aldermen, and Commonalty of the City of New York, acting as guardians of the Public Health, Dr.
To 146,944 Inhabitants.

To expenses of sickness, incurred by neglect to remove certain nuisances, and maintain the Public Health, as per agree- ment, including medicines, nursing, and medical expenses, at \$20 each.....	\$2,938,880 00
To loss of time, 4,025 years, at \$500 per year... 2,012,500 00	
	\$4,951,380 00

From this bill there are omitted all considerations for bodily and mental suffering, the expenses of funerals of the unnecessary dead, the grief of survivors, and the pauperism of widows and orphans. Those items, could a pecuniary estimate be made of them, would swell the amount to an aggregate that would be frightful to contemplate, but which is none the less real because divided among so many thousand sufferers.

Though such a charge as this may never have been made, or contemplated, is not the position morally sound? Such a case would possibly puzzle a jury not a little, and our judges might find no precedent for it in the books, but its equity is none the less clear.

We have thus demonstrated that the question of the public health is a question of *private interest*, the extent of which I have but feebly portrayed.

The next aspect in which it is presented to us is, that of its *public interest*. Every life lost (may we not add, every life prevented), and every day lost by sickness, is so much detracted from the strength of the State. This truth was, perhaps, never more strikingly exemplified than

at the present crisis of our national affairs, when every man counts at his full value. For,

“ What constitutes a State ?
 Not high-raised battlement, or labored mound,
 Thick wall, or moated gate ;
 Not cities, proud, with spires and turrets crowned ;
 Not bays and broad-armed ports,
 Where, laughing at the storm, rich navies ride ;
 Not starred and spangled courts,
 Where low-browed baseness wafts perfume to pride.
 No ! *Men*, high-minded *men*,
 With powers as far above dull brutes endued
 In forest, brake, or den,
 As beasts excel cold rocks, and brambles rude ;
 Men who their duties know,
 But know their rights, and knowing dare maintain.

* * * * *

(And among those rights, there is none dearer than the right to live.)

Such *was* this favored isle,
 Than Lesbos fairer, and the Cretan shore ;
 Shall *Hygeia* no more smile ?
 Shall we hence languish, and be men no more ?
 Since all *must* life resign,
 The well-known means which help us it to save
 'Tis folly to decline,
 And sink untimely to the silent grave.”

I have before exhibited the effect upon our present available strength, of the neglect of the government to guard the lives of our population during the last twenty-two years, within which period have been lost at least 50,000 lives, which, by an intelligent and faithful administration of the Health Department, *might have been saved*, and added to the present population, every member of which is, at the present moment, of direct value to the government itself.

VALUE OF PREVENTIVE SANITARY MEASURES.

We have recently had two exhibitions of the value of scientific, skilled, and well-trained energy, in the management of the great army which has been so suddenly called into existence for the protection of the Union and the Constitution. We all remember with what sad accounts our ears were daily saluted, of the undisciplined condition of many of the troops in and about the Capitol—of their irregular and depraved deportment, leading naturally to the disaster of July 21st; and we now behold with corresponding pleasure, the magical change wrought by a single well-informed and determined head. Had matters continued as before that date, disaster after disaster must have ensued “till all were lost.” But military science, in the hands of a skilled practitioner, has redeemed the country’s credit, preserved the army, and saved the country.

But even the sleepless energy and skill of that young general would have been inadequate to the avoidance of those numerous causes of disease and death which invariably hover around masses of human beings, and are far more destructive than the bullets of the foe. To the well-directed efforts of the United States Sanitary Commission is the whole country indebted, in a great degree, for the present excellent and almost unexampled condition of health of the army, and it is owing to the self-sacrificing labors of the members of that Commission that thousands of families in each loyal State, are now rejoicing in the lives of their fathers, sons, and brothers, who, but for these services, would now be numbered with the dead, but not in soldiers’ sepulchres.

There has rarely been seen a more striking proof of the value of well-directed efforts, guided by established scientific law, than is now presented in the Sanitary condition of the huge masses of men composing the Union army.

Mr. President, I believe I am regarded as something of an enthusiast in this matter of Sanitary reform, and the ability of Sanitary appliances to save life. I confess, therefore, a pleasure in an occasional observance of a more than confirmation of the views I entertain, by those who, I know, possess the fullest confidence of the general and scientific public ; as thus :

In a communication addressed to the various Life Insurance Companies, by the United States Sanitary Commission, dated June 21, 1861, occurs the following language :

“ We can do a vast work, in a short time, if we have abundant means. \$50,000 would, we seriously think, enable us to save 50,000 lives.”

And in a general “ Circular asking contributions,” dated the next day, this opinion is reiterated, with a refinement. They say :

“ It is supposed that \$50,000 could be expended with the greatest advantage, during the present year, in the work of the Commission, and that every single dollar so spent would save one life.”

Does this language appear extravagant ? I appeal to the facts—the results of that Commission’s public agitation of the subject, and their direct official labors at the camp and in the fortress. When and where was ever such a host collected, and kept for months together, with so little mortality from natural causes ?

It is seven months this day since the capitulation of Fort Sumter, and we have seen an army of 500,000, collected from city, farm, and factory, and put in the field with scarcely an idea on their part of the insalubrious influences which are the invariable accompaniments of such gatherings. Providentially there sprang into existence, almost simultaneously, and hovered like a protecting angel over the camps of these devoted citizens, this Sanitary Commission. Its effects are seen and felt in the unparalleled sanitary condition of the hosts it has labored to protect.

It cannot, of course, be demonstrated to the letter, that their anticipation of one life being saved for every single dollar expended, has been realized, but no one entertains a doubt that every dollar placed in their hands has been honestly and judiciously expended, and has brought good fruit. For one, I have no doubt that whether that Commission has expended \$50,000, or only one-fifth of the sum, it will be found at the end of this contest, that by their influence (and they are without power to enforce their precepts), upon the army and the people, they will have redeemed their quasi pledge, and saved 50,000 lives.

Contrast this with the condition of the comparatively little army of Great Britain in the Crimea, during the seven months beginning Oct. 1, 1854. At no time did the numerical strength of that army reach 30,000, and yet within the period mentioned there occurred over 10,000 deaths from disease. They then had no Sanitary Commission there, nor had they profited by their experience since WELLINGTON wrote to Gen. FANE in 1810 :

“ I wish I had it in my power to give you well-clothed troops, or to hang those who ought to have given them their clothing.”

These terrible results of inattention to the hygienic wants of the army having aroused the home Government to the performance of its duty, a well-qualified Sanitary Commission was, in the following year, organized and dispatched to the seat of war, and in a few months the value of Sanitary law and practice was demonstrated by a reduction in the mortality of the troops, from 28.82 per cent. to one-half of one per cent.*

* For the following brief synopsis of the results of the operations of the British Sanitary Commission in the Crimea, I am indebted to ELISHA HARRIS, M.D., an active member of the United States Sanitary Commission.

The following tables exhibit the total and comparative statistics of sickness and mortality in the British Army in the Crimean campaign, and the rate per cent. of the diseases and deaths of all the forces, for 1st. A period of six months just previous to and at the commencement of the works of the Sanitary Commission, viz.: from January to June, 1855; and, 2d. A period of six months, from January to June, 1856, after those works for Sanitary improvement had produced their legitimate results. [All sickness and deaths in the Medical Staff, among Commissioned Officers, the Land Transport, and the Mounted Corps, *as well as all martial wounds or deaths in battle*, are excluded from these tables; also nearly 5,000 cases of sickness that failed to be properly registered during the early period of the campaign.]

NUMBER OF CASES OF SICKNESS.		DEATHS.	The rate per cent. of the entire Army— sick and dying from diseases—during two periods of six months each, as above stated.				
			Rate p. ct. sick.	Rate p. ct. of deaths.	Rate p. ct. sick.	Rate p. ct. of deaths.	
From Fevers.....	31,230	3,452					
“ Diseases of the Lungs.....	12,382	644					
“ “ Bowels.....	55,765	5,950					
“ Cholera.....	7,574	4,502					
“ Scurvy.....	2,096	178					
“ Ophthalmia.....	3,301					
“ Ulcers and Boils.....	12,542	37					
“ All other diseases.....	37,583	3,295					
Total number of cases.	162,473	18,058	Total ..	135.9	28.82	41.7	—.5 or $\frac{1}{2}$ of 1 p. ct.

Thus the fact is demonstrated, by the most unerring statistics, that during the period beginning eight months after the commencement of reforms by the Sani-

HEALTH ARRANGEMENTS OF NEW YORK.

Instinctively in the mind arises the question, If so much excellent Sanitary work can be done with so little means among so incongruous and unsettled a mass as an army in the field, why may not the same good result be secured in a settled city? What is this city but a huge camp—with these differences, that its inhabitants do not live under thin canvas roofs, are not packed *quite* so much like herrings in boxes, and possess domestic means of purification, ventilation, &c., which the soldier knows not of? But we have seen that instead of a saving of 50,000 lives, there has been a *waste* of at least that number in the last twenty-two years in this city—and that 5,000, at the very lowest estimate, were thrown away last year. What is the system of government which suffers this shocking loss, and what its pecuniary cost?—in other words, what do the

tary Commission in the Crimea, the rate of sickness in the army was reduced to less than *one-third* of that which prevailed until those reforms were inaugurated, the exact ratio of that decrease being as 1359 to 417, or $\frac{12}{45} \frac{9}{3}$! while the mortality—which is the more significant test of the utility of Sanitary improvements—presents the marvelous contrast of 28.82 to —.5, or 5764 to 100!! *Less than one fifty-seventh.*

It is worthy of remark that, while the statistics show that considerable sickness continued to prevail during the latter or improved period, the records of the Army Hospitals exhibit the fact that the particular diseases that were *most remarkably diminished* were those which Sanitary measures are known to prevent or greatly diminish, viz., the Zymotic diseases, such as fevers, and those maladies that are so largely represented in the list given in the foregoing Table.

That this wonderful improvement in health, which was the salvation of the British forces in the Crimea, was directly and positively dependent upon *Sanitary works and preventive hygienic measures*, is a fact confessed alike by the military and medical officers of those forces.

And in further corroboration of that fact, it should be stated that while the British troops were thus being rescued from the fatal diseases that had threatened to make their encampment a Golgotha, the French camps, though located more favorably, and within a rifle's range of the British, continued to grow more and more sickly during all the time of the grand improvement in the camps of

people of this city pay annually in money for this self-destruction?

The answer to the first of these questions has been given in the publications of this Association, and repeated in official legislative documents, and need be alluded to here only in connection with the answer to the last question.

By the Charter, that branch of the City Government which has "cognizance of *all* matters affecting the Public Health" is called the City Inspector's Department.

In addition to this, the statute law gives us two other organizations for this same purpose: 1st. *A Board of Health*, composed of the Mayor, Aldermen, and Councilmen (which has had no meeting for nearly a year); and, 2d. A body called *Commissioners of Health*, composed of six persons, three of whom form parts also of the organizations previously mentioned, and which performs the same rela-

their allies. In the latter, the best Sanitary regulations were introduced and rigidly enforced by a Sanitary Board, while in the former (the French camps) such regulations were utterly neglected, "until," as a distinguished historian of the war has said, "with the French army, *peace became a military necessity.*"

The Crimean SANITARY COMMISSION consisted of three gentlemen, viz., Dr. SUTHERLAND, Dr. MILROY, and Mr. RAWLENSON, a civil engineer. *Each of these Commissioners had, for several years, made Sanitary Science, and its applications, a special study.* They proceeded to the Crimea in April, 1855, taking with them upwards of thirty skilled assistants and laborers, together with such implements and apparatus as they knew would be required in the ventilation and sewerage of hospitals and barracks, the cleansing and drainage of encampments, and the purification or disinfection of transports and ships. Among these means were pipe tubing, drainage-pipes, filters, ten thousand square feet of perforated zinc plates for ventilation, hinges, pulleys, window fixtures, a ship load of peat charcoal, etc., etc. Immediately upon arrival on the Bosphorus and in the Crimea, the Sanitary works were commenced; first by thorough cleansing, both within and without, the hospitals, barracks, and tents, and in these works nearly one hundred men were employed for many months; old sewers were cleaned and flushed; new drains were made; surface filth, refuse, and decaying materials, by thousands of cartloads, were

tive service in regard to the public health, as would a fifth wheel in the progression of a coach.

The cost of these three institutions in the year 1860, is found in the Annual Report of the Comptroller for that year. An examination of the pages of that interesting volume shows that there were paid on their account, independent of the cleaning of the streets. \$153,249 35

and for street cleaning----- 325,371 37
making the total cost of (I had like to have said, for the
maintenance of the public health) \$478,620 72.

Here then, in the *national* service, is a body of citizens asking only \$50,000 to save 50,000 lives, which otherwise, in all probability, would be lost; and in the *municipal* service, three separate organizations, spending almost ten times that sum, and *permitting* (which is next to *causing*) the annual loss of 5,000 lives, which ought to be preserved.

With the statement of one other fact, which to every intelligent mind is sufficient to account for this heart-sor-

removed, and such sources of offense as could not be removed were deeply covered with dry earth and peat charcoal. Water courses, springs, and the water supply were cleansed and controlled; the tents and camping grounds were rigidly inspected and purified, and an abundant supply of fresh air and pure water was everywhere secured in hospital and in camp, and, so far as practicable, the diet and general comfort of the soldiers were improved.

The results of this simple and inexpensive labor astonished the world, though Sanitary science has always promised, and its advocates prophesied, just such results.

Says Miss NIGHTINGALE, "It is the whole experiment of Sanitary improvement upon a colossal scale. * * * We had, in the first seven months of the Crimean campaign, a mortality of 60 per cent. per annum among the troops *from disease alone*: * * * we had in the last six months a mortality not much greater than among our healthy Guards at home." The rate of mortality during this last period of the war was less than $2\frac{1}{2}$ per cent. of the whole force.

rowing difference between our national and municipal Sanitary affairs, I take leave of this branch of the subject. That fact is this :

The United States Sanitary Commission consists of fifteen individuals, of whom seven are physicians, known to all as having already earned distinction in their profession—two are clergymen of high repute in theirs—two are distinguished officers of the Army—and the rest are men whose fame as philosophers and civilians, is world-wide. They are assisted in their labors by three or four secretaries, a majority of whom are also able graduates in medicine.

After this picture, how shall we bear to look upon the other? But I beg your patience, while I briefly, but truthfully, portray its absurd contrast :

In the City Inspector's Department, are 138 individuals.

In the Board of Health " 42 "

In the Commissioners of Health " 3 extra.

Making a total of 183

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Of the three extra Commissioners of Health, one is a distinguished surgeon, one a retail apothecary, and the other the Health Officer, residing on Staten Island. Among the members of the Board of Health, there is not to be found one medical man—such would be strangely out of place—while of the remaining 138 attachés of the City Inspector's Department, there is but one laying any claim to a knowledge of medical science, and he is but a clerk, without any executive functions.

Among the subordinates of the City Inspector are twen-

ty-two Health Wardens. Were these important offices occupied as they should be, and as they would be under a proper system, by men of education in Sanitary law, of conscientious regard for and devotion to their duties, as is the case in almost every other large city, how different would be our records of mortality. But who are the incumbents? Judge ye what chance we have for improvement in the public health, as I recite, from a recent legislative report,* the occupations of these Health Wardens in 1859. Of the twenty-two,

1 was a clerk,	2 were house carpenters,
1 a speculator,	1 a barber,
1 an emigrant runner,	3 were rumsellers,
1 a barkeeper,	1 a cartman,
1 a policy dealer,	1 a butcher, and
1 a plumber,	1, until his appointment as
1 a stone-mason,	Health Warden, had no
2 were bricklayers,	business occupation.
1 a ship carpenter,	

In 1861, the political necessities of somebody (not the Sanitary interests of the city) required that each Health Warden should have an Assistant, with the same compensation, \$1,000 per annum, so that the public treasury is now depleted yearly, for these men, of \$44,000, without any return. This office of *Assistant Health Warden* has been created without a shadow of reason, and as to their capacity for Sanitary service, we have only to say, they are the *equals of their superiors*—in each Ward “par nobile fratrum.”

* Report of the Select Committee appointed to Investigate the Health Department of the city of New York.—Senate Doc. No. 49, 1859.

PRINCIPLES FOR THE ATTAINMENT OF SANITARY REFORM.

There are two principles which lie at the foundation of all true Sanitary arrangements, and which cannot properly be overlooked in the construction of any system, whose object is the most thorough and efficient protection of the people against diseases of every kind.

The first of these principles is, that it is the *whole* people who are to be thus protected—not merely one ward, one section, one city, or even one State—and if it is designed to do the whole work of Sanitary protection, the whole country should be embraced within the sphere of its operations. For we must remember that while there are many disorders which afflict humanity, of purely local origin, and circumscribed in the extent of their action, and hence removable or preventable at their immediate source, there are others which know no limits, spreading over large areas of country, and communicable from person to person, by clothing, by merchandise, by vehicles, or by atmospheric currents. On this and other accounts, the scope of operations of a Sanitary system should be coextensive with the population; the political and Sanitary government should progress side by side, and hand in hand.

If therefore it were possible, our *National* Government should establish a Sanitary Board, like that now in operation in Great Britain, whose protecting arm is spread over every section, with one central head. The close intimacy and free intercourse which characterize us as a social and commercial people (I speak of what was, and what, I trust and believe, will be restored), bringing together in daily and hourly intercourse the inhab-

itants of widely diverse climates and susceptibilities, demand that there should be some common regulator of that intercourse, for the protection of all alike. But it has been decided by high authority, that the matter of Health Police is a reserved State right, and that national laws governing the commercial intercourse of the people, must yield to those of the several States in this particular.

To the State, then, we turn, for the next most effective general arrangement; and whether we regard the source of power, or the unity of the people's interest, it is clear that any system of Sanitary protection, to be full and complete, should cover the entire area of the State, from Montauk to Niagara.

Local subordinate agencies, or Boards of Health, are of course necessary for the immediate care of the separate localities, but there should be an authority, superior and independent, for the systematic government of the whole; for action in those cases in which two or more localities are interested, as in the draining of extensive marshes, the regulation of intercourse between infected places, the influence of building dams, railroads, and public institutions, &c., and for appeal in cases of dispute between conflicting interests. As evidence of the importance of this latter, I may cite a few instances.

In a certain part of this city exists a very extensive and serious nuisance, against which the neighbors complained, and succeeded in obtaining an order for its abolition from the Board of Health. In a week or two the decision was reversed, and the nuisance continues, through, as is believed, the political and pecuniary influences of the owners.

Another instance was seen in the result of the investigation into the character of the swill milk factories in this city, in which, contrary to the opinions of some of the soundest members of the medical profession, and the recital of numerous cases of injury from the use of their products, a local and purely political Board of Health decided there was no harm from them.

Another case is described in the following note from the physician of a State Institution, which is threatened with a serious insanitary nuisance :

LUNATIC ASYLUM, }
AUBURN, Oct. 19, 1861. }

Dear Sir: Will you please give me your opinion of the propriety, in a Sanitary view, of building pig-pens for over one hundred hogs, to occupy one-half acre of the walled yard (wall fourteen feet high), containing five acres appropriated for the use of this Asylum. The hogs to be fed with the refuse from the State Prison.

Said pig-yard to be within two hundred feet of the main building of the Asylum, and on the side from which the wind blows.

I am very truly yours,

EDWARD HALL.

It may readily be perceived how important and valuable would be an independent Board of Appeal, of scientific character, in all such cases.

But supposing this desideratum of a *State Sanitary Board* unattainable, the New York Sanitary Association has suggested the next best step. It has proposed to unite all the territory and population surrounding our beautiful bay and harbor, within the bounds of our State, into one district and one people, for their Sanitary government,

as they are, in fact, one politically, commercially, socially, and by every temporal interest—especially in their exposure to one great source of disease from abroad, through the vessels at Quarantine.*

To this wholesome and just measure there has ever been but one objection, and that from one quarter only, viz. : The office-holders of the City Inspector's Department, whose sinecure salaries give them power and leisure for a most unequal contest.

The *second principle* which we claim as essential is, *the proper education of every Sanitary officer*. No intelligent person, who reflects a moment upon the vast variety of subjects included in the idea of Sanitary regulation, but must admit that there is scarcely another branch of public service demanding so varied a knowledge.

“ The Officer of Health must himself be thoroughly informed of *all* the circumstances which affect the health of man, not only in his isolated condition as an individual, but in his social condition, and in his state of aggregation.

“ Preventive medicine, while it constitutes a special, is itself the highest and most useful, branch of medicine, and requires in its missionaries a correspondingly long and special study, to become useful promulgators of its doctrines, and workers in its cause.”†

Although this proposition is too self-evident to require further comment, we find in a recent public document, emanating from the health department of this city, over the

* See map appended to the Legislative Report of March 9, 1860.

† Dr. John Simon, Chief Officer of Health of London.

name of the City Inspector,* the following assertion and opinion, which cannot be allowed to pass without their refutation, and with which I close :

“ On an examination of the public records of the City Inspector’s office, when administered under the supervision of inspectors of the medical profession, I have not been able to discover a single sanitary improvement, or even a practical suggestion, as coming from them in their reports to the Common Council” * * * * *

“ and a merely medical man might find, in the discharge of his duties, a necessity for qualities which an education solely medical would poorly supply.”

The author of those sentences has read the history neither of his department nor his country, to much purpose. Among many other instances that might be cited, let me inform him, in regard to the first of these statements, that one of the most important of the laws now governing that department, that which prohibits the removal of the dead from the city without a permit, whereby alone the records of mortality can be made up, was the suggestion solely of one of his medical predecessors, made nearly twenty years ago, and by him was its enactment obtained in spite of the veto of the then Mayor.

And in reply to the insinuation, that a medical education is incompatible with “ practical abilities and common sense qualifications,” I recommend him to read the history of Bunker Hill, where, at the head of a noble band, contending for the liberties we are now enjoying, Doctor JOSEPH WARREN yielded up his life.

I point him, also, to that eminent physician, who, while

* Communication to the Charter Convention.

serving as surgeon to a regiment in Mexico, finding, on one occasion, all his superior officers disabled, unhesitatingly placed himself at the head of the troops, and by his skill and courage won the day. Returning to his home, the uncertainty of the fate of Sir JOHN FRANKLIN fired his adventurous spirit, and he who had won honors as a surgeon and a martial leader, now became the gallant navigator of the Polar seas, and in the memory of all high-minded men, the name of Doctor KANE will live forever.

And yet again, as if *only* in the ranks of the profession could be found a sufficient amount of "practical ability and common sense," this city is honored this day with the presence of his worthy successor, another distinguished Arctic explorer, Doctor HAYS.

And finally, I point to Doctor SIMON, one of the most distinguished physiologists of Great Britain, and Chief Medical Officer of Health of the city of London, the magnificent results of whose administration of the Sanitary Laws of that metropolis furnish ample evidence of the *necessity* of a thorough medical education in the head of a health department, and who has given us these words, pregnant with truth and wisdom :

"*PREVENTIVE medicine will effect infinitely more for mankind than all the drugs which have yet been discovered, and all the curative skill which has ever been exerted for the alleviation of disease.*"

